BLACK BOX NETWORK SERVICES

DKM FX and FXC HD Video & Peripheral Matrix Switching System

For flexible and instantaneous crosspoint switching of Full-HD video in matrix switching enterprises.

www.black-box.eu/DKMFX

DKM FX HD Video and Matrix Peripheral Switches

Flexible, instantaneous crosspoint switching and peripheral extension in matrix switching enterprises.

Features

- A scalable, highly reliable peripheral matrix switching and HD video routing system.
- Very flexible. Any port can be an input (computer) or an output (user).
- Modular, no fixed ports. Moves, adds, and changes are quick and easy.
- Different Chassis sizes with 48, 80, 160 or 288 ports.
- With cascading up to 4.096 ports can be controlled within one DKM system (required optional Software ACX-CAS).
- Terabit-speed switching backplane.
- Nearly instantaneous video switching. Virtually no delay or blanking.
- Central management with full support of external controllers for automated processes (via optional Software ACX-API).
- Dedicated bandwidth allocation guarantees optimum performance of all connected user devices.
- Facility for pre -configured switching via macros, favorites, as well as Force and Follow Mode (requires Software ACX-API/-JAVA).
- Comprehensive, multi-level redundancy concept plus Syslog and SNMP options.
- Supports high-quality, full-frame DVI-D or HDMI video. Full HD compatible. Boasts digital resolutions up to 2560 x 1600 or 1080p.
- Support many video input formats like DVI, HDMI, SDI, VGA, and other analog standards.
- Ideal also for computers with multi head graphic cards or user consoles with multiple monitors.
- Computers and user are connected to the switch using the DKM extenders.
- Flexible connections depending on the required distances: up to 140m over CATx or up to 10 kilometers over fiber optic.
- Enables mixing of media on inputs/outputs —CATx in and fiber out or vice versa.
- Various interface cards available for your peripherals with USB HID, USB 2.0, PS/2, RS232, RS488, analog and digital audio.

Give multiple users fast, reliable access to high-quality, real-time digital video — plus a whole host of peripherals across the enterprise — with the top-of-the-line DKM FX HD Video and Peripheral Matrix Switch system.

This chassis-based, modular cross point switching system enables you and the other users to switch and extend HD video, USB, audio, and serial data over extremely long distances. Use it in any application where many users have to interface with CPUs and other high-end AV equipment supporting high-quality video. Plus, it works as a video matrix switch. The DKM FX/FXC is fully supported by automatic processes with external controllers.

Using non-blocking switch technology, the DKM FX processes and routes HDMI or DVI single-link resolutions, including full HD 1080p, with little or no delay of video — even at the screens which is far away from the switching chassis itself.

What's more, it's not only supporting DVI-D digital video, but it's also supporting SDI, VGA and many analogue video formats and connections to a wide array of peripherals, including USB HID, USB 2.0 (up to 480 Mbps), audio, RS-232, RS-488 and IR devices, Wacom® tablets, and even the legacy PS/2 keyboards and mice. For user consoles with large or multiple monitors interface cards with dual link DVI or multiple video ports are available.

It's especially ideal for enterprise networks and mission-critical control/command rooms, as well as video production or broadcasting applications and medical image processing where HD video is everything.

Many users can connect their KVM consoles and their peripherals to various multimedia sources (computer, CPUs, servers, Blue Ray players etc.), either locally or in a distant room or office via the switch. Consoles and computers are connected to the central DKM FX/FXC switch via the DKM extender units. The DKM Extender have a fanless design and provide a zero noise to give you a quite work area. The DKM extenders offer a wide range of interfaces and transmit the signals over long distances. And it's very flexible. The DKM FX HD Video and Peripheral Matrix Switch enables you to configure HD KVM switching and DVI routing exactly as you require. Mix and match fiber and CATx ports

through cards and SFPs plugged into its slots. So you are not limited in any way.

With the switch, -you will get a controller card which has USB keyboard/mouse and DVI monitor connectors for local KVM administration; - a RJ-45 port for interfacing with your network and a client machine that has the DKM FX with the Java tool installed; and a serial port for control via an external RS-232 device. Because the card has a built-in CPU, you can control all functions from any console without the need for an external CPU or media control. OS platform independent, the switch and its controller card can be accessed by Windows®, Linux®, or Mac OS® users.

Versatile switching capabilities.

Switching can be performed by using an on-screen display (OSD), keyboard commands, or through a local serial console connection at the rack. You can also switch from a remote site via a ServSwitch DKM Extender. Or control it via a Creston® or AMX® keypad controller plugged into the extender. No matter what ever the route you choose, KVM switching can be shared with any other KVM user, connected directly or connected remotely through a ServSwitch DKM Extender.

Switches within milliseconds.

Users can switch seamlessly and almost instantaneously from DVI to KVM video with the DKM FX HD Video and Peripheral Matrix Switch. It takes just milliseconds for this to happen (similar IP-based types of solutions can take as long as 15 seconds to perform this action).

Reduces downtime.

Modular in design, the DKM FX enables you to change peripheral and CPU connections on the fly and ensure zero downtime. Add or remove cards and SFPs in the slots and reroute inputs and outputs while the DKM FX system's up and running. DKM Extenders and DKM switches give you dual power supplies and triple power supplies (for the 160-, and 288-port switches) for a full redundancy. Plus the configuration is not only held on the controller cards, but it's also on each single I/O card.

Designed for easy expansion.

Add connections and changes inputs/outputs as your enterprise evolves. When a department purchases new hardware, just slide a new interface card into the chassis. You can also cascade multiple switch chassis if you exceed the number of available ports.

Signal repeater capabilities are built in.

From its ports, the switch supports switch-to-device fiber links up to 10 kilometers (6.2 mi.) and CATx links up to 140.m (460 feet). The switch works as a repeater, essentially it will be doubling your distance from end-to-end. You can even configure CATx on an input for output on fiber, or vice versa, executed with all the previously mentioned configurations. It is often used to connect the computers to the switch over in the data center over a short distance, while over coming longer distances to the user consoles using fiber optic cables.

Central Management

All DKM components can be centrally managed and updated with the latest firmware.

Using the offline configuration, administrators can define new settings, test them and add them later to the live system. Nine configuration memories allow testing without harming the existing system settings. For complex switching processes, the administrator can pre-define macros and favorites, that are later executed with a simple command. The Force and Follow Mode allows the administrator to manage computers from any console connected to the system, while he is not available at his desk. Finally the DKM systems provides the option to configure "virtual CPUs". This feature allows the instant switching to an identical group of computers in case of an emergency.

TECH SPECS

Resolution — DVI-D SL: 2048 x 1152 at 60 Hz; up to 24-bit color depth

Distances (Max.) —
CATx: 460 feet (140 m); solid STP CAT5e recommended;
Multimode: 3281 feet (1000 m);
Single-mode: 6 miles (10 km) @ 9/125 um

Connectors —
Control via TCP/IP: (1) RJ-45 10/100 Mbps;
Control via RS-232/V.24: (1) DB9 F;
Power: (1) or (2) IEC 320 C14, 100 to 240 VAC

Interface — DVI-D, DVI-I (VGA input), SDI SD, HD, SG, USB HID, USB 2.0 transparent, analog audio, digital audio, serial RS-232

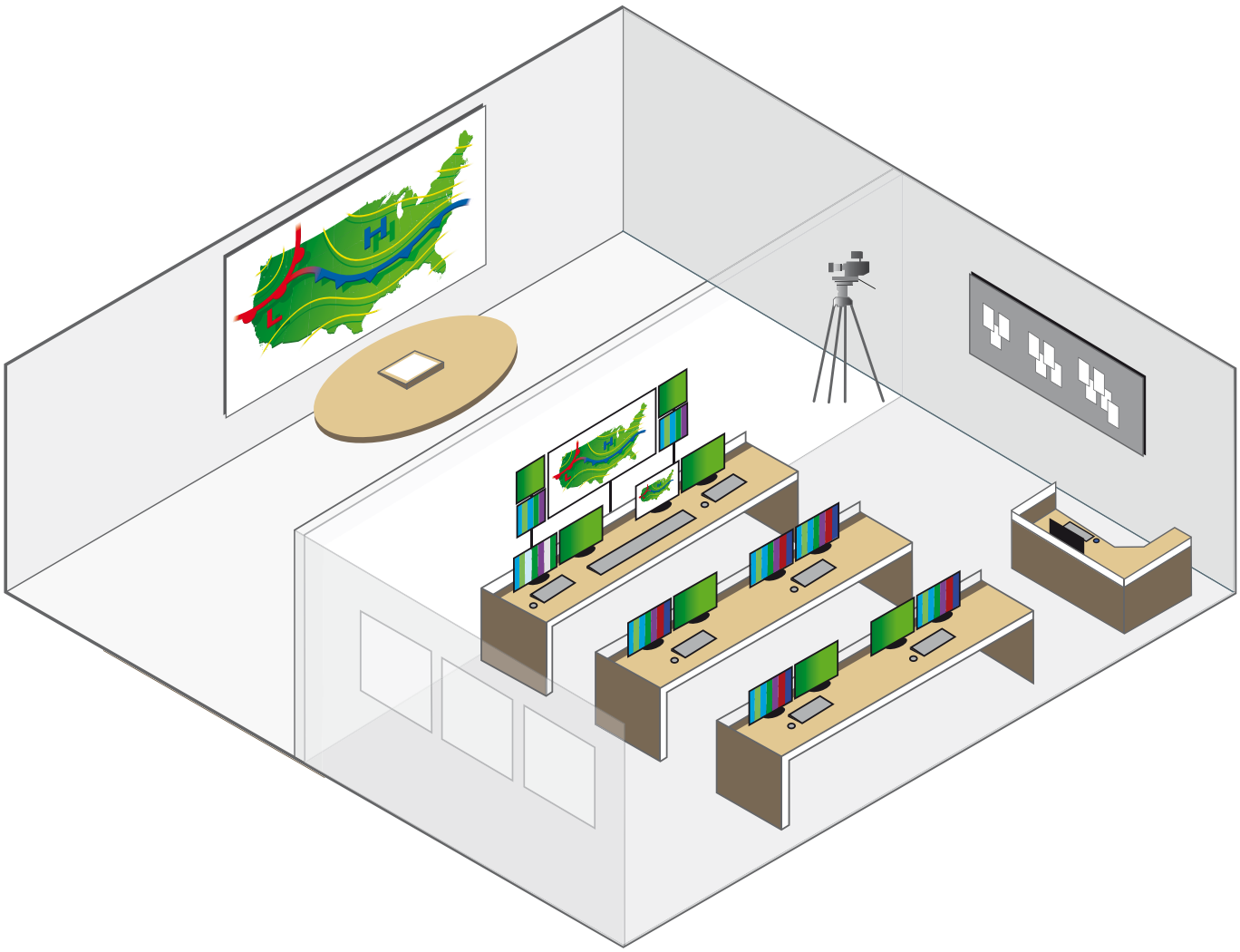
Management — OSD on every console, Ethernet (Web, FTP, Telnet, SNMP), serial or infrared

Power — (1) or (2) internal power supplies, 90–240 VAC, 2 x 150 W, redundancy option

Size —
ACX048: 3U (5.25"H) x 19"W x 9.1"D
ACX080: 4U (7"H) x 19"W x 9.1"D
ACX166: 9U (15.75"H) x 19"W x 12"D
ACX288: 13U (22.75"H) x 19"W x 12"D

Weight — ACX048: 19.6 lb. (8.9 kg); ACX080: 24.5 lb. (11.1 kg); ACX166: 58 lb. (26.3 kg); ACX288: 76.2 lb. (34.6 kg)

Broadcast Application Pre or Post - Production Application



Users, who are directors, presenters, and editors, require an undisturbed work environment. They need to work away from loud or continuous outside noise and unnecessary heat. A distraction-free workplace is key to productivity and error-free results.

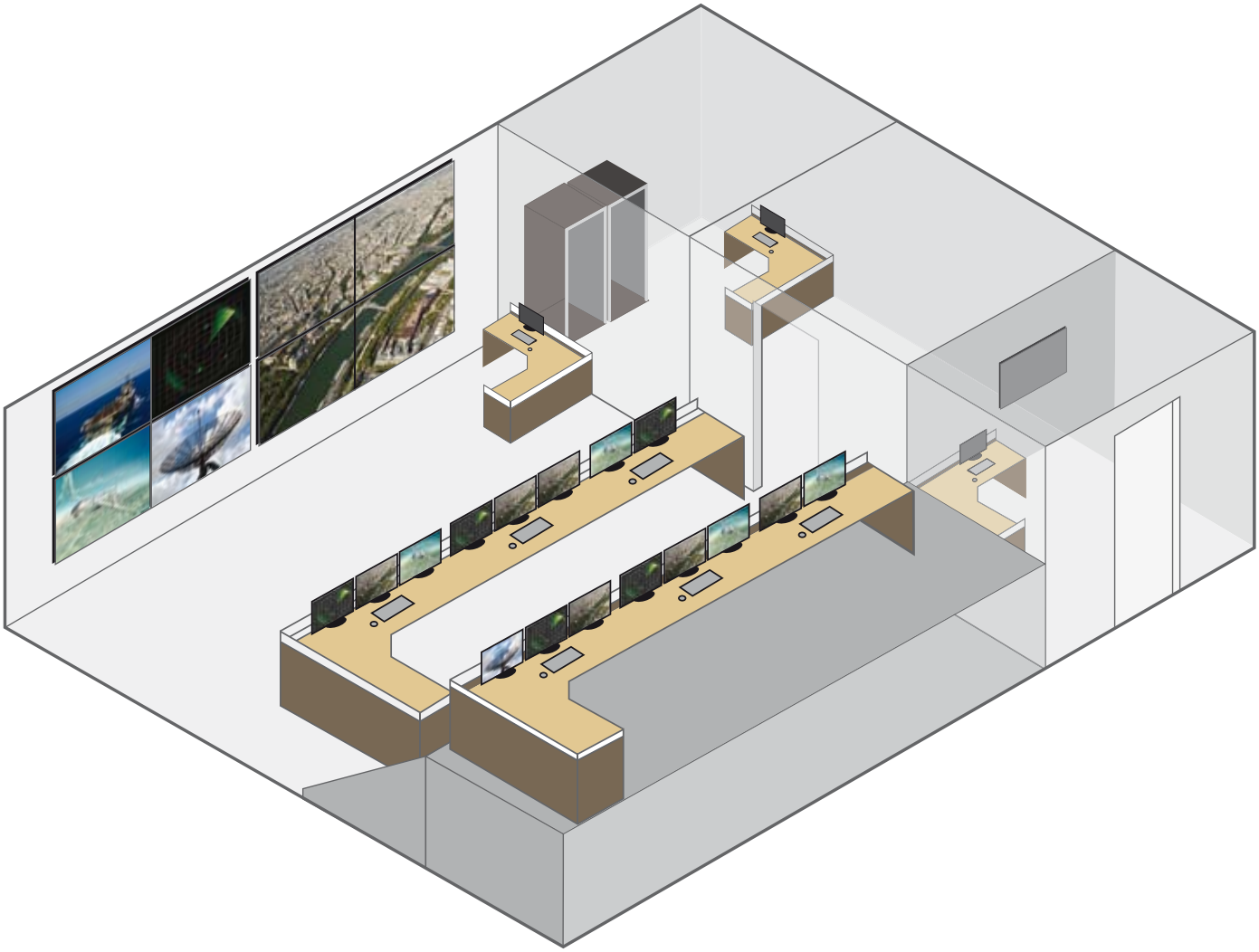
Additionally, broadcast is a collaborative environment. Many people need access to video and sound for review and editing. They need this access immediately in real time, and the quality of the work has to be very high.

KVM and HD video peripheral switching and extension solutions are ideal for broadcasting environments. They enable access to many users at once, in real-time, and to high-definition video signals, audio, serial, and USB peripherals. The configuration possibilities are endless. KVM and video peripheral switching and extension also offer flexible transmission options: CATx cable, fiber optic cable, or in future also P-based extension.

In the diagram above, KVM and HD video and peripheral extension is used to transmit every required signal from the central equipment room to the end users. DKM FX extender transmitters take the signal from computer and send it over cabling to the DKM FX extender receiver. Receivers provide all the necessary ports for connecting devices needed by the users (keyboard, mice, touchscreens, speakers, USB peripherals). Individual extension technologies can easily be combined in a freely scalable, high-performance switching matrix.

KVM and HD video and peripheral extension optimizes broadcast processes by using existing network infrastructure. Video signals, including VGA, DVI-I, SDI, and HDMI can be simultaneously transmitted with peripheral signals. The USB interface ensures that even specialty peripherals such as tablets and touchscreens can be easily integrated.

Command and Control Room Application



As with broadcasting, a command and control room setup requires access for multiple users to video, CPUs, and peripherals. Additionally, in a command and control application, one user needs to control the flow of information and switching.

A command and control room (also referred to as a command and control center) is typically a secure room or building in a government, military, or prison facility that operates as the agency's dispatch center, surveillance monitoring center, coordination office, and alarm monitoring center all in one.

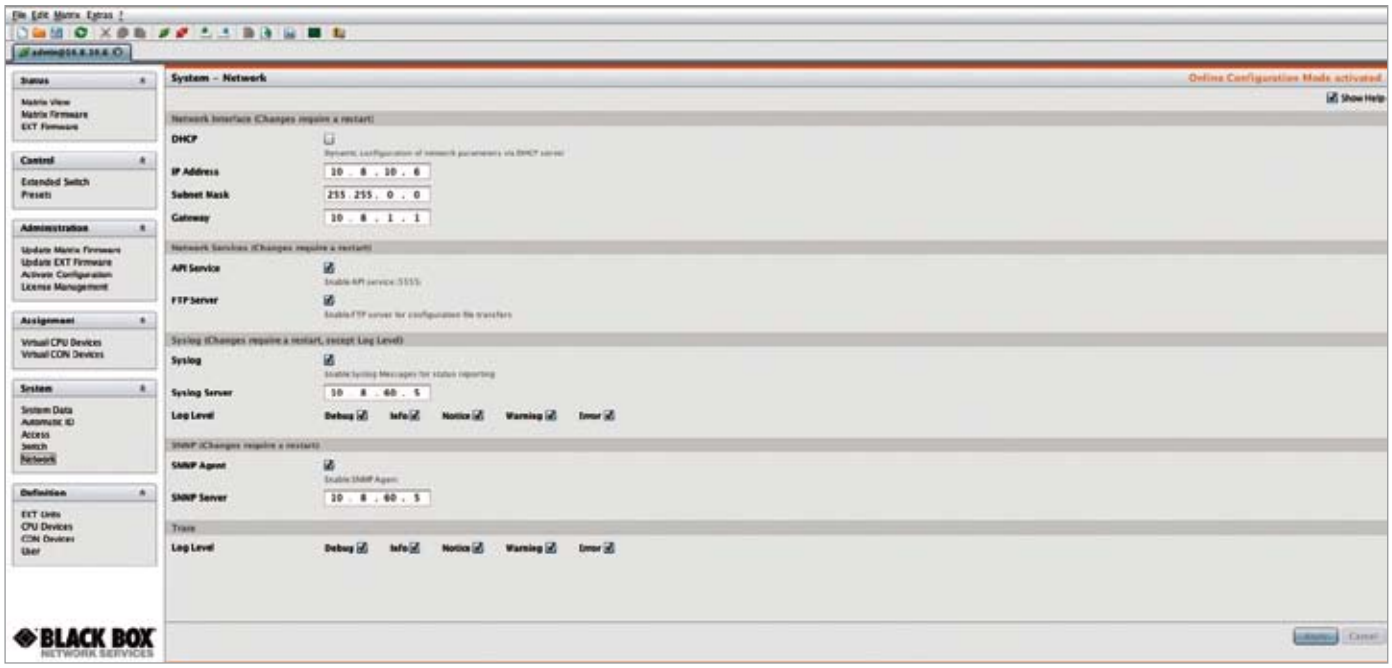
This state-of-the art matrix and peripheral switching and extension technology offers an array of ports that can be dynamically allocated as input or output. Ports can be connected to a CPU or connected to a console, and ports can be switched according to the users' requirements. As long as there are available ports, you can switch in any combination of inputs and outputs. It's not a one-to-one configuration like you find in most matrix switches.

With the DKM FX switching system, a command and control room setup can be extended through several rooms or buildings. A server room houses servers and the main management switch, plus all the CATx transmitters. CATx is used for the input because it is pre-existing in the infrastructure.

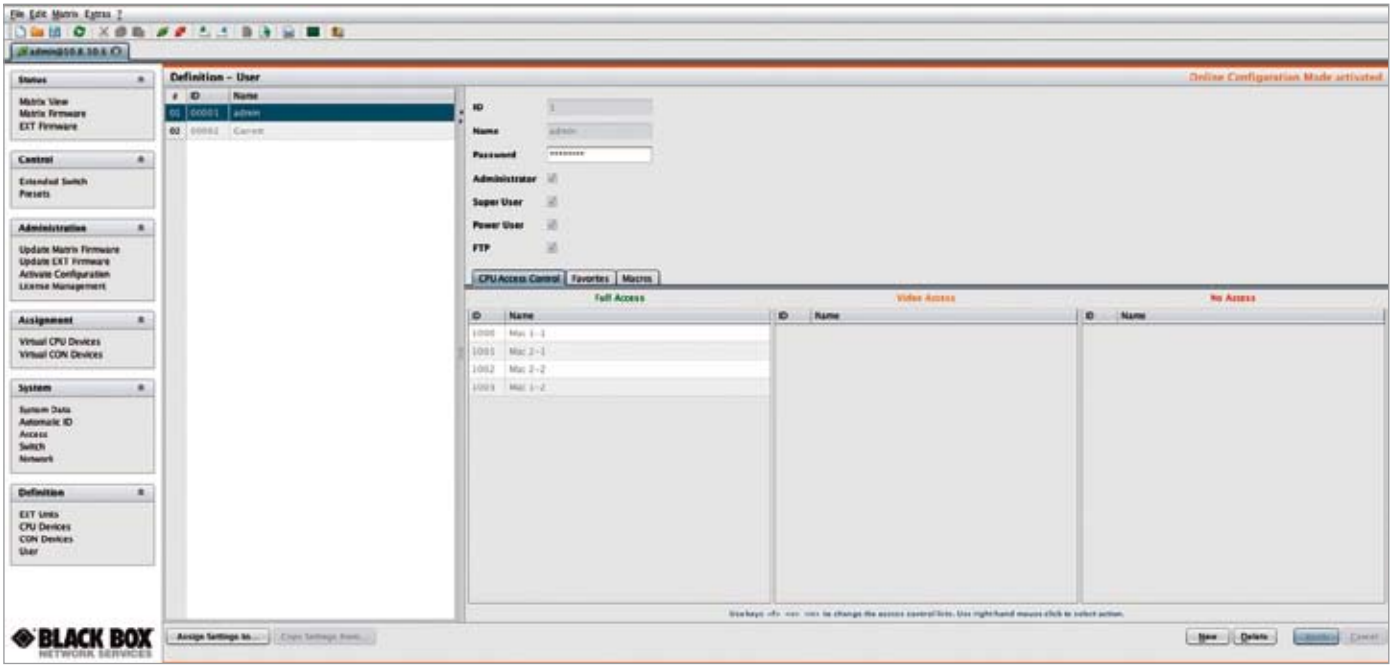
The outputs on the DKM FX are then fiber optic cables to the DKM FX receivers at each computer distributed throughout another room (or to other buildings on campus). Using fiber optic cabling increases distance, prevents ground loops, and corrects for voltage differentials.

Video distribution comes from a single workstation, and commanders (administrators) work at the keyboard/mouse workstations while viewing video on a quad screen. In the setup above, you can see that the DKM FX video extension incorporates a triple-head application.

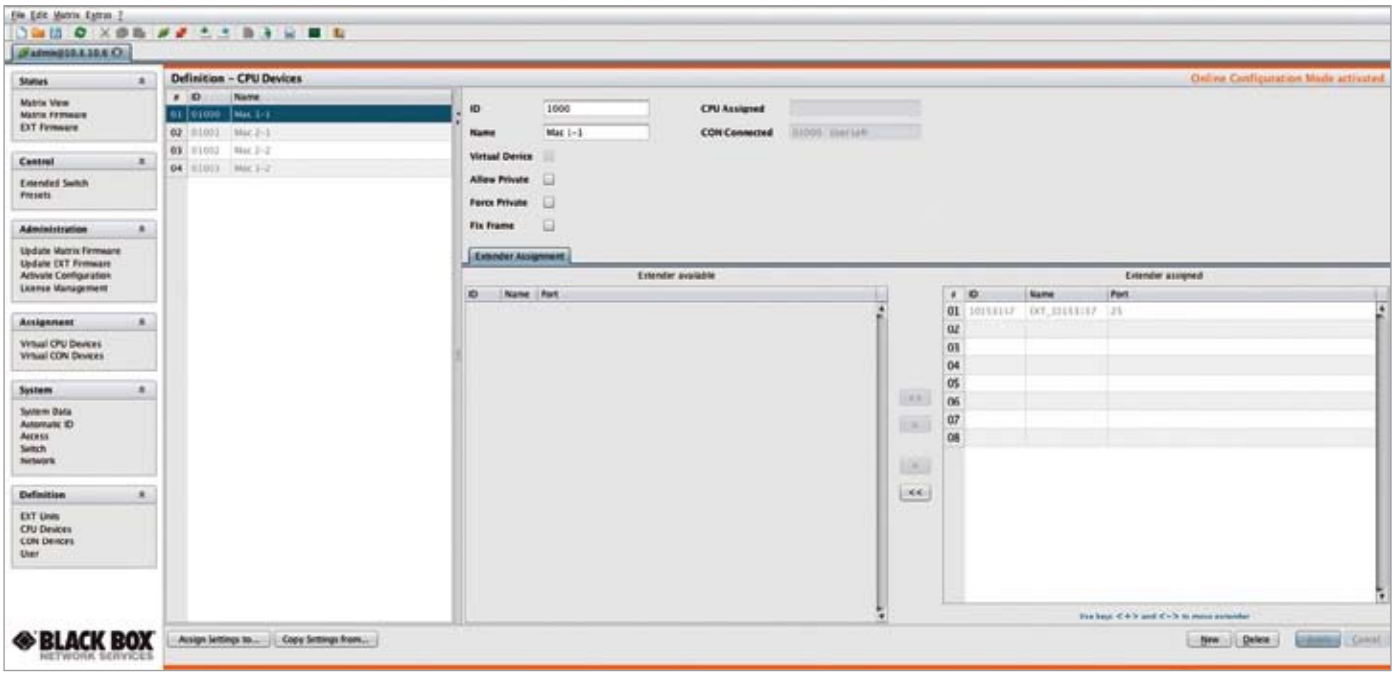
DKM FX HD Video and Peripheral Matrix Switch Utility Screen Shots



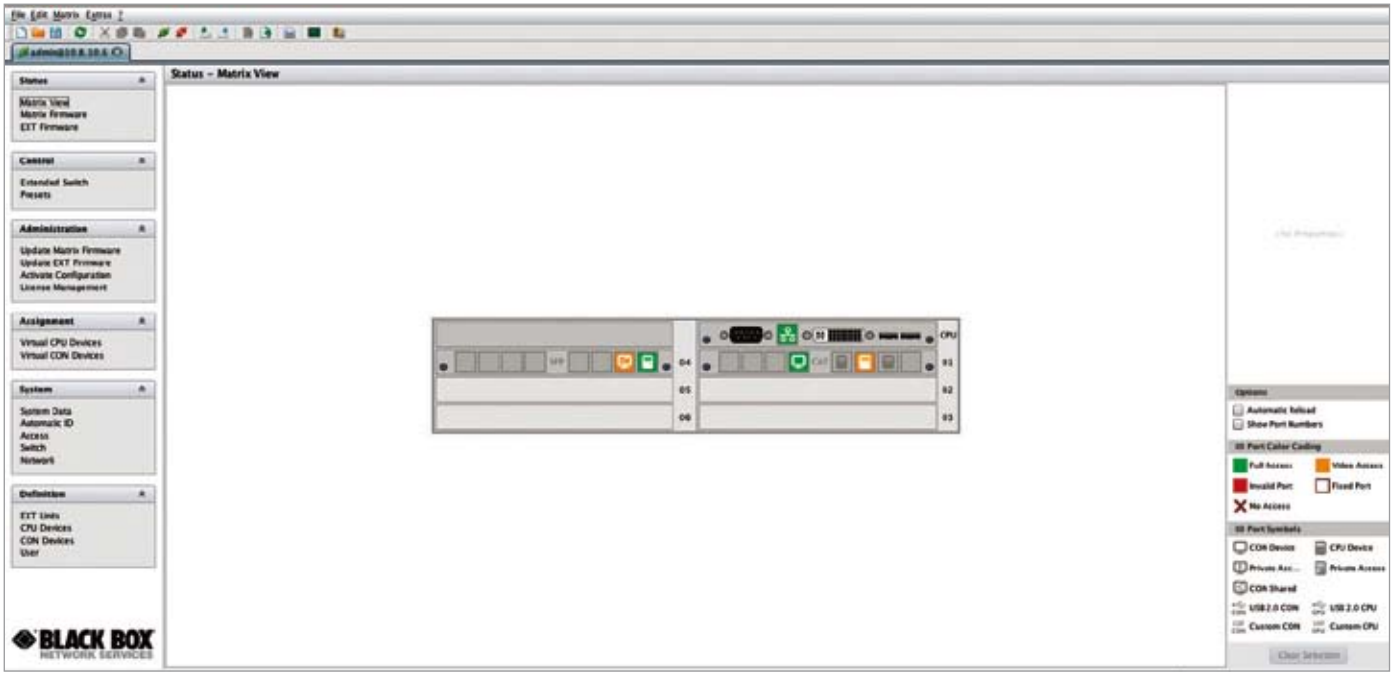
Network Configuration Screen:
Administrators can configure correct settings to enable other users, devices, or services to interface with the DKM FX system.



User Configuration Page:
The administrator uses this screen to add, edit, and remove users and other system administrators.



CPU Configuration Page:
Configure the computers and transmitters connected to the computers within the DKM FX system.



Java Tool:
Display the real-time connection status between users and computers.

DKM FX and FXC Compact Switch System Licenses

- **Java** (ACV-JAV)—This license is required to be installed to use Java software to switch presets and targets from the Java interface or Force Connect.
- **Syslog-SMNP** (ACX-SYS)—This license is required to be installed to enable SNMP and SYSLOG capabilities for DKM FX and DKM FXC switches.
- **API** (ACX-API)—This license is required to be installed to enable API interface of DKM FX and DKM FXC.
- **Cascading** (ACX-CAS)—This license is required to be installed to enable seamless cascading of DKM FX and DKM FXC.
- **Glide & Switch** (ACX-GSW) — This License enables a seamless mouse switching by moving the cursor from one monitor to the next (limited to four end I/O Cards next to each other within the switch.

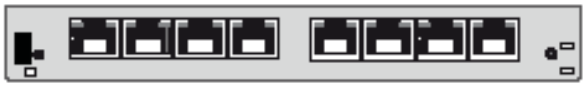
Note:
The DKM FX and DKM FXC switches require a one-time purchase of one or more of the listed licenses to run certain software or capability options. Each switch requires a license installation.
Questions? Contact our FREE Tech Support.

DKM FX and DKM FXC Order Information

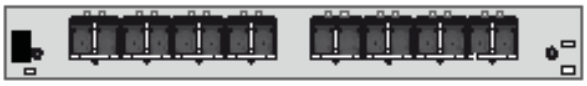
Item	Item Number
DKM FX Matrix Switches	
Configurable Housing with (1) Controller Card and (1) Power Supply	
48 Ports	**ACX048**
80 Ports	**ACX080**
160 Ports	**ACX160**
288 Ports	**ACX288**
Redundant Power supplies for DKM FX Matrix Switches	
Redundant/Spare Power Supply for ACX48 and ACX080	**ACX080-PS**
Redundant/Spare Power Supply for ACX160	**ACX160-PS**
RedundantSspare Power Supply for ACX288	**ACX288-PS**
8-Port I/O-Cards (In/Output) for DKM FX Switches	
8 I/O Ports CATx RJ45 connectors	**ACXIO8-C**
8 I/O Ports with fiber SFPs, 1 Gbps DVI	**ACXIO8-SM**
8 I/O Ports with fiber SFPs, 2.5 Gbps DVI	**ACXIO8-HS**
8 I/O Ports empty SFP-slots for individual need	**ACXIO8-SFP**
8 Inputs & 8 Outputs empty for SDI video	**ACXIO8-SDI**
DKM SFP Moduls for 8-Port I/O cards	
CATx	**ACXSFPC**
Fiber (MM or SM), 1 Gbps DVI	**ACXSFPS**
Fiber (MM or SM), 2.5 Gbps DVI	**ACXSFPHS**
Mini BNC SDI/HD-SDI Input	**ACXSDI-CX-T**
Mini BNC SDI/HD-SDI Output	**ACXSDI-CX-R**
Fiber SDI/HD-SDI Input	**ACXSDI-SM-T**
Fiber SDI/HD-SDI Output	**ACXSDI-SM-R**
Mini BNC 3G-SDI Input	**ACXSDI3-CX-T**
Mini BNC 3G-SDI Output	**ACXSDI3-CX-R**
Fiber 3G-SDI Input	**ACXSDI3-SM-T**
Fiber 3G-SDI Output	**ACXSDI3-SM-R**
DKM FX Accessories	
Spare Filter for DKM FX 48-Port	**ACX048-FIL**
Spare Fan for DKM FX 48-Port	**ACX048-FAN**
Spare Filter for DKM FX 80-Port	**ACX080-FIL**
Spare Fan for DKM FX 80-Port	**ACX080-FAN**
Spare Filter for DKM FX 160- or 288-Port	**ACX288-FIL**
Spare Fan for DKM FX 160- or 288-Port	**ACX288-FAN**
1-Slot Blanking Panel for all DKM FX	**ACX288-BLKP-1S**
2-Slot Blanking Panel for all DKM FX	**ACX288-BLKP-2S**
4-Slot Blanking Panel for all DKM FX	**ACX288-BLKP-4S**
8-Slot Blanking Panel for all DKM FX	**ACX288-BLKP-8S**

Item	Item Number
DKM FXC compact Matrix Switches	
CATx only	
8 Ports (1U)	**ACXC8**
16 Ports (1U)	**ACXC16**
32 Ports (1U)	**ACXC32**
48 Ports (1U)	**ACXC48**
64 Ports (2U)	**ACXC64**
80 Ports (2U)	**ACXC80**
CATx and SFPs for fiber	
48 CATx Ports and 16 Fiber SFP Ports (2U)	**ACXC48F16**
48 CATx Ports and 32 Fiber SFP Ports (2U)	**ACXC48F32**
DKM SFP Modules for the SFP ports of the DKM FXC	
Fiber (MM or SM), 1 Gbps DVI	**ACXSFPS**
Fiber (MM or SM), 2.5 Gbps DVI	**ACXSFPHS**

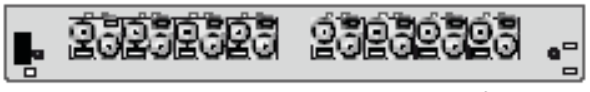
Item	Item Number
DKM FX and FXC Compact Switch System Licenses	
Java and Force Connect	**ACX-JAV**
External Control over IP/RS-232 (inclusive ACX-JAV)	**ACX-API**
Syslog and SNMP	**ACX-SYS**
Seamless Cascading	**ACX-CAS**
Glide & Switch Function	**ACX-GSW**



CATx 8-Port I/O Card for DKM FX



Fiber 8-Port I/O Card for DKM FX



Mini BNC I/O Card, 8x Inputs, 8x Outputs for DKM FX

DKM FX Compact HD Video and Matrix Peripheral Switches

Instantaneous switching of HD video in a smaller model for SMBs and space-conscious organizations.

Picture: DKM FXC
16, 32 or 48 CATx Ports

- Use the cost-efficient DKM FX Compact switches to establish connections from consoles (monitor, keyboard, mouse, and other peripheral devices) to various sources, such as computers and CPUs. Use the DKM FXC to expand your DKM FX system with further ports / requires ACX-CAS).
- Each port can be input (source connection) or output (user connection).
- Compact chassis requires maximum 2U in server cabinets or racks.
- Choose from FXC Switches with 8, 16, 32, 48, 64, and 80 CATx ports or 48 CATx ports plus 16 or 32 fiber SFP ports.
- Use the DKM Extenders to connect computers and users while extending signals over the distance at the same time.
- Support end-to-end links up to 280m over CATx, or 20 kilometers over fiber.
- High availability with redundant power supplies included.
- Optional software bundles for external control, SYSLOG/SNMP, seamless cascading, etc. — one-time license purchase is good for the life of the switch.
- Offer the same functions for management, video performance and interfaces (except SDI) as the DKX FX system.

NOTE: These DKM FX and DKM FXC components are part of a modular system. You will need to contact Black Box to have them configured for your application. For a FREE consultation on your application, contact our Tech Support Engineers.

Mobile Broadcasting Application

Because of space considerations and weight limits, outside broadcasting vans (OBVs) and satellite news gathering (SNG) applications present the need for unique and flexible broadcasting solutions. Additionally, all systems must be easily accessible and fully operable for multiple users.

With compact KVM switching and extension systems, like the DKM FX Compact switches, placing equipment efficiently in mobile broadcasting vehicles is simple. The computers are consolidated because the number of required keyboards, video monitors, and mice is minimized. A compact and lightweight KVM peripheral matrix switch ensures fully comprehensive access to these systems without impacting the operational functionality, but with optimized user comfort.

DKM Compact KVM Extenders

Use these KVM Extenders to connect users and computers with your central DKM FX/FXC switch or as standalone units in point-to-point KVM extensions.

DKM Compact Transmitter
CATx Single DVI, USB HID plus digital Audio (ACX1T-12D-C)

DKM Compact Receiver
CATx Dual DVI plus USB HID (ACX1R-22-C)

Features

- Connect users and computers to your DKM FX/DKM FXC while extending them simultaneously over long distances.
- Order one transmitter for each computer connected to the DKM.
- Use one receiver for each user within the DKM system.
- Choose the cable media depending on your distance requirements. Over CATx, go up to 460 feet (140 m); over multimode fiber, go 3281 feet (1000 m); and over single-mode fiber, go up to 6 miles (10 km).
- Compact housing enables high-density mounting within 19" racks (up to four devices in 1U).
- Options for DVI and VGA video as well as USB HID, transparent USB 2.0, RS-232, analog, and digital audio.
- 2-. 4-, 6-, or 21-port housing available with or without redundant power.
- Also work as standalone point-to-point KVM extension without a DKM Switch.

Item	Code
DKM FX Compact Transmitters	
CATx	
Single DVI-D Plus (2) USB HID	**ACX1T-11-C**
Single DVI/VGA In/ DVI-D Out Plus (2) USB HID	**ACX1T-11V-C**
Single DVI-D Plus (4) USB HID, Audio and RS-232	**ACX1T-12A-C**
Single DVI-D Plus (4) USB HID and Digital Audio	**ACX1T-12D-C**
Single DVI-D Plus (2) USB HID and (4) USB 2.0 (480Mbps)	**ACX1T-13-C**
Single DVI, USB HID, RS-232, Audio, and (2) USB 2.0 at 36 Mbps	**ACX1T-14A-C**
Dual DVI-D Plus (4) USB HID	**ACX1T-22-C**
Fiber	
Single DVI-D Plus (2) USB HID	**ACX1T-11-SM**
Single DVI/VGA In/ DVI-D Out Plus (2) USB HID	**ACX1T-11V-SM**
Single DVI-D Plus (4) USB HID, Audio and RS-232	**ACX1T-12A-SM**
Single DVI-D Plus (4) USB HID and Digital Audio	**ACX1T-12D-SM**
Single DVI-D Plus (2) USB HID and (4) USB 2.0 (480Mbps)	**ACX1T-13-SM**
Single DVI, USB HID, RS-232, Audio, and (2) USB 2.0 at 36 Mbps	**ACX1T-14A-SM**
Dual DVI-D Plus (4) USB HID	**ACX1T-22-SM**
Fiber, High Speed Applications with 2.5 Gbps DVI	
Single DVI-D Plus (4) USB HID	**ACX1T-11HS-SM**
Single DVI/VGA In/ DVI-D Out Plus (2) USB HID	**ACX1T-11VHS-SM**
Single DVI-D Plus (2) USB HID, (4) USB 2.0 at 480 Mbps	**ACX1T-13HS-SM**
Single DVI, USB HID, RS-232, Audio, and (2) USB 2.0 at 36 Mbps	**ACX1T-14AHS-SM**
Dual DVI-D Plus (4) USB HID	**ACX1T-22HS-SM**

Item	Code
DKM FX Compact Receivers	
CATx	
Single DVI-D Plus (2) USB HID	**ACX1R-11-C**
Single DVI-D Out Plus IR-RC and (2) USB HID	**ACX1R-11V-C**
Single DVI-D Plus (4) USB HID, Audio and RS-232	**ACX1R-12A-C**
Single DVI-D Plus (4) USB HID and Digital Audio	**ACX1R-12D-C**
Single DVI-D Plus (2) USB HID and (4) USB 2.0 (480Mbps)	**ACX1R-13-C**
Single DVI, USB HID, RS-232, Audio, and (2) USB 2.0 at 36 Mbps	**ACX1R-14A-C**
Dual DVI-D Plus (4) USB HID	**ACX1R-22-C**
Fiber	
Single DVI-D Plus (2) USB HID	**ACX1R-11-SM**
Single DVI-D Out Plus IR-RC and (2) USB HID	**ACX1R-11V-SM**
Single DVI-D Plus (4) USB HID, Audio and RS-232	**ACX1R-12A-SM**
Single DVI-D Plus (4) USB HID and Digital Audio	**ACX1R-12D-SM**
Single DVI-D Plus (2) USB HID and (4) USB 2.0 (480Mbps)	**ACX1R-13-SM**
Single DVI, USB HID, RS-232, Audio, and (2) USB 2.0 at 36 Mbps	**ACX1R-14A-C**
Dual DVI-D Plus (4) USB HID	**ACX1R-22-SM**
Fiber, High Speed Applications with 2.5 Gbps DVI	
Single DVI-D Plus (4) USB HID	**ACX1R-11HS-SM**
Single DVI/VGA In/ DVI-D Out Plus (2) USB HID	**ACX1R-11VHS-SM**
Single DVI-D Plus (2) USB HID, (4) USB 2.0 at 480 Mbps	**ACX1R-13HS-SM**
Single DVI, USB HID, RS-232, Audio, and (2) USB 2.0 at 36 Mbps	**ACX1R-14AHS-SM**
Dual DVI-D Plus (4) USB HID	**ACX1R-22HS-SM**

Order information for DKM FX, DKM FXC, and modular DKM Extenders is continued on page 12.

NOTE: Single-mode DKM FX Extender Modules can also be operated over multimode fiber cable.

DKM Modular Extenders

Flexible, modular KVM extension system takes video, USB, and serial peripherals long distances designed exactly to you needs.

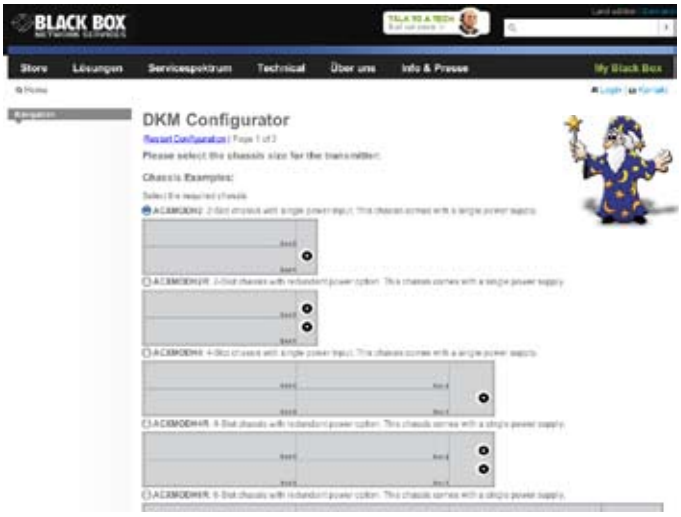
DKM 4-Port Modular DKM Extender (ACXMODH4)

DKM Extender
Basic Receiver Card
SL DVI-D and USB HID
(ACX1MR-DHID-C)

DKM Extender
Basic Transmitter Card
SL DVI-D and USB HID
(ACX1MT-DHID-C)

Features

- Connect users and computers to your DKM/DKM FX system while extending them simultaneously over long distances.
- Order one transmitter for each computer connected to the switch.
- Use one receiver for each user within the DKM system.
- Choose the cable media depending on your distance requirements. Over CATx, go up to 460 feet (140 m); over multimode fiber, go 3281 feet (1000 m); and over single-mode fiber, go up to 6 miles (10 km).
- Many video options with DVI-D or HDMI, as well as inputs for SDI, VGA and other analog video formats.
- Peripheral options for USB HID, PS/2, embedded USB 2.0 at 36 Mbps, transparent USB 2.0 at 480 Mbps, RS-232, RS-422, analog, and digital audio.
- Choose a housing depending on your interface requirements with 2-. 4-, 6-, or 21-port housing.
- Various power options with AC and DC power supplies, with or without redundancy.
- The Modular DKM Extenders are installed in our factory, but the new housings with backplane also allow a Plug-and-Play replacement of the modules.
- Also work as a standalone, point-to-point KVM extension without a DKM switch.



Online Configurator

On the next page, you see all available options of the Modular DM Extenders. Or use our new Online configurator at:

www.black-box.eu/DKMwizard

With this tool, you can easily configure a DKM Extender to your needs. The result in PDF format clearly shows the layout, the required components and cable media including maximum length. For a price inquiry just mail the PDF to your Black Box sales department. Or contact our product experts within the Free Tech Support for comprehensive advice.

Order Information

Item	Code
Step 1: Choose the Housing for a Modular DKM Extender	
Modular Housings with AC-Power Supplies	
2-Slots	
with (1) external Power Supply	**ACXMODH2-R2**
with (1) ext. Power Supply+ext. Redundancy opt.	**ACXMODH2R-R2**
with (1) int. Power Supply + ext. Redundancy option	**ACXMODH2R-P-R2**
4-Slots	
with (1) external Power Supply	**ACXMODH4-R2**
with (1) ext. Power Supply + ext. Redundancy opt	**ACXMODH4R-R2**
6-Slots	
with (1) int. Power Supply + ext. Redundancy opt	**ACXMODH6R-R2**
21-Slots	
with (1) int. Power Supply + int. Redundancy opt	**ACXMODH21R**
Modular Housings with internal DC-Power Supplies and external Redundancy option	
2-Slots with (1) 12 VDC Power Supply	**ACXMODH2R-P12**
2-Slots with (1) 24 VDC Power Supply	**ACXMODH2R-P24**
2-Slots with (1) 48 VDC Power Supply	**ACXMODH2R-P48**
6-Slots with (1) 12 VDC Power Supply	**ACXMODH6R-P12**
6-Slots with (1) 24 VDC Power Supply	**ACXMODH6R-P24**
6-Slots with (1) 48 VDC Power Supply	**ACXMODH6R-P48**
Modular Housing with Backplane	
6-Slots with (2) internal AC-Power Supplies	**ACXMODH6-BPAC**

Item	Code
Accessories for Modular Housing for DKM Extender	
Redundancy Options	
Redundancy Upgrade excl. Power Supply for ACXMODH2-R2	**ACXMODH2-R**
Redundancy Upgrade excl. Power Supply for ACXMODH4-R2	**ACXMODH4-R**
Redundancy Power Supply for ACXMODH2-R2, ACXMODH2R-R2 and ACXMODH2R-P-R2	**ACXMODH2-PS**
Redundancy Power Supply for ACXMODH4-R2 and ACXMODH4R-R2	**ACXMODH4-PS**
Redundancy Power Supply for ACXMODH6R-R2	**ACXMODH6-PS**
Redundancy Power Supply for ACXMODH21R	**ACXMODH21-PS**
Mounting Options	
19" Shelf for (3) 2-Slot, (1) 4-Slot or (1) 6-Slot Chassis	**ACXMODH-RMK**
19" Rack Mounting Ears for 2-Slots Chassis with ext. Power Supply	**ACXMODHEAR-2**
19" Rack Mounting Ears for 2-Slots Chassis with int. Power Supply	**ACXMODHEAR-2P**
19" Rack Mounting Ears for 4-Slots Chassis	**ACXMODHEAR-4**
19" Rack Mounting Ears for 6-Slots Chassis	**ACXMODHEAR-6**
Table/Wall Mounting Kit for 2-/4-Slot Chassis	**ACXMODH-DMK**
Table/Wall Mounting Kit for 6-Slot Chassis	**ACXMODH-TMK**

Item	Code
Step 2: Choose at least one Basic Card(s) for the Transmitter	
1 Gbps Basic Transmitter Cards for Modular DKM Extender	
CATx	
(1) SL DVI-D + (2) USB HID	**ACX1MT-DHID-C**
(1) VGA/SL DVI In/ DVI-D Out + (2) USB HID	**ACX1MT-VDHID-C**
(2) SL DVI-D + (2) USB HID	**ACX2MT-DHH-C**
(1) DL DVI-D + (2) USB HID	**ACX2MT-DLH-C**
(1) SL DVI-D + (2) USB HID with DVI splitting	**ACX1MT-DHID-2C**
(1) VGA/SL DVI in/DVI-D out + (2) USB HID with DVI splitting	**ACX1MT-VDHID-2C**
(1) HDMI + (2) USB HID	**ACX1MT-HDMI-C**
(1) HDMI + (2) USB HID with HDMI splitting	**ACX1MT-HDMI-2C**
(1) HDMI + (2) USB HID with local access	**ACX1MT-HDM2-C**
(1) HDMI + (2) USB HID, local access with HDMI splitting	**ACX1MT-HDM2-2C**
Fiber	
(1) SL DVI-D + (2) USB HID	**ACX1MT-DHID-SM**
(1) VGA/SL DVI In/ DVI-D Out + (2) USB HID	**ACX1MT-VDHID-SM**
(1) VGA/SL DVI in/DVI-D out + USB HID with DVI splitting	**ACX1MT-VDHID-2S**
(2) SL DVI-D + (2) USB HID	**ACX2MT-DHH-SM**
(1) DL DVI-D + (2) USB HID	**ACX2MT-DLH-SM**
(1) SL DVI-D + (2) USB HID with DVI splitting	**ACX1MT-DHID-2S**
(1) HDMI + (2) USB HID	**ACX1MT-HDMI-SM**
(1) HDMI + (2) USB HID with local access	**ACX1MT-HDM2-SM**
(1) HDMI + (2) USB HDMI splitting	**ACX1MT-HDMI-2S**
(1) HDMI + (2) USB HID, with local access and HDMI splitting	**ACX1MT-HDM2-2S**
2.5 Gbps Highspeed Basic Transmitter Cards	
Fiber	
(1) SL DVI-D + (2) USB HID	**ACX1MT-DHS-SM**
(1) VGA/SL DVI In/ DVI-D Out + (2) USB HID	**ACX1MT-VDHS-SM**
(1) SL DVI-D + (2) USB HID with DVI Splitting	**ACX1MT-DHS-2S**

Item	Code
Step 3: Choose the suitable Basis Card(s) for the Receiver	
1 Gbps Basic Receiver Cards for Modular DKM Extender	
CATx	
(1) SL DVI-D + (2) USB HID	**ACX1MR-DHID-C**
(2) SL DVI-D + (2) USB HID	**ACX2MR-DHH-C**
(1) DL DVI-D + (2) USB HID	**ACX2MR-DLH-C**
(1) SL DVI-D + (2) USB HID with DVI splitting	**ACX1MR-DHID-2C**
(1) HDMI + (2) USB HID	**ACX1MR-HDMI-C**
(1) HDMI + (2) USB HID with HDMI splitting	**ACX1MR-HDMI-2C**
(1) HDMI + (2) USB with KVM Switch for the local Workstation	**ACX1MR-HDSW-C**
(1) HDMI + (2) USB with KVM Switch for the local Workstation and HDMI splitting	**ACX1MR-HDSW-2C**
Fiber	
(1) SL DVI-D + (2) USB HID	**ACX1MR-DHID-SM**
(2) SL DVI-D + (2) USB HID	**ACX2MR-DHH-SM**
(1) DL DVI-D + (2) USB HID	**ACX2MR-DLH-SM**
(1) SL DVI-D + (2) USB HID with DVI splitting	**ACX1MR-DHID-2S**
(1) HDMI + (2) USB HID	**ACX1MR-HDMI-SM**
(1) HDMI + (2) USB HID with HDMI splitting	**ACX1MR-HDMI-2S**
(1) HDMI + (2) USB with KVM Switch for the local Workstation	**ACX1MR-HDSW-SM**
(1) HDMI + (2) USB with KVM Switch for the local Workstation and HDMI splitting	**ACX1MR-HDSW-2S**
2.5 Gbps Highspeed Basic Receiver Cards	
Fiber	
(1) SL DVI-D + (2) USB HID	**ACX1MR-DHS-SM**
(1) SL DVI-D + (2) USB HID with DVI Splitting	**ACX1MR-DHS-2S**

Item	Code
Step 4: Choose the Peripheral Interfaces for the Transmitter	
Daughter Card Peripheral Transmitter	
(2) USB HID	**ACX1MT-HID**
(2) embedded USB 2.0 with 36 Mbps	**ACX1MT-EU**
Analog Audio + RS-232	**ACXMT-AR**
Analog Audio, unidirectional Digital Audio + RS-232	**ACX1MT-ARD**
Analog Audio + (2) USB HID and RS-232	**ACX1MT-ARH**
Analog Audio + (2) USB 2.0 and RS-232	**ACX1MT-ARE**
Analog Audio + (2) USB HID, RS-232 and PS/2	**ACX1MT-ARP**
Unidirectional Digital Audio	**ACX1MT-DA**
Unidirectional Digital Audio + (2) USB HID	**ACX1MT-DAH**
Bidirectional Digital Audio	**ACX1MT-DAX**
Bidirectional Digital Audio l + (2) USB 2.0	**ACX1MT-DAE**
RS-422	**ACX1MT-422**
(4) USB 2.0 transparent with 480Mbps over separate CATx Link	**ACX1MT-U2-C**
(4) USB 2.0 transparent with 480Mbps over separate Fiber Link	**ACX1MT-U2-SM**
Daughter Cards Video Transmitter	
(1) HDMI over separate CATx Link	**ACX1MT-HDO-C**
(1) HDMI over separate Fiber Link	**ACX1MT-HDO-SM**
(1) Highspeed HDMI over separate Fiber Link	**ACX1MT-HSO-SM**
(1) VGA Input/ DVI-D Output	**ACX1MT-VGA**
(1) RGB Input/ DVI-D Output	**ACX1MT-RGB**
(1) SDI/VGA/analog Video Input/ DVI-D Output	**ACX1MT-SDI**
(1) VGA/EGA/CGA/analog Video In/ DVI-D Output	**ACX1MT-EGA**

Item	Code
Step 5: Choose the suitable Peripheral Interfaces for the Receiver	
Daughter Card Peripheral Receiver	
(2) USB HID	**ACX1MR-HID**
(2) embedded USB 2.0 with 36 Mbps	**ACX1MR-EU**
Analog Audio + RS-232	**ACXMR-AR**
Analog Audio + unidirectional Digital Audio and RS-232	**ACX1MR-ARD**
Analog Audio + (2) USB HID and RS-232	**ACX1MR-ARH**
Analog Audio + (2) USB 2.0 and RS-232	**ACX1MR-ARE**
Analog Audio + (2) USB HID, RS-232 and PS/2	**ACX1MR-ARP**
Unidirectional Digital Audio	**ACX1MR-DA**
Unidirectional Digital Audio + (2) USB HID	**ACX1MR-DAH**
Bidirectional Digital Audio	**ACX1MR-DAX**
Bidirectional Digital Audio + (2) USB 2.0	**ACX1MR-DAE**
RS-422	**ACX1MR-422**
(4) USB 2.0 transparent with 480Mbps over separate CATx Link	**ACX1MR-U2-C**
(4) USB 2.0 transparent with 480Mbps over separate Fiber Link	**ACX1MR-U2-SM**
Daughter Cards Video Receiver	
(1) HDMI over separate CATx Link	**ACX1MR-HDO-C**
(1) HDMI over separate Fiber Link	**ACX1MR-HDO-SM**
(1) Highspeed HDMI over separate Fiber Link	**ACX1MR-HSO-SM**

Order Information

Daughtercard Transmiter analog Audio , undirect digital Audio and RS-232 (ACX1MR-ARD)

Daughtercard Receiver analog Audio and RS-232 (ACX1MR-AR)

Daughtercard Receiver analog Audio , undirect digital Audio a+nd RS-232 (ACX1MR-ARD)

DKM FX Solution - Black Box supports you 100%.

The right solution for a lot of applications

The DKM FX/FXC system offers solutions for almost any application where multiple users have to interface with remote sources supporting high-quality video and a wide peripheral range - whether they are large systems with or without automatic control or smaller applications with up to eight computers. And the possibilities of adapting the system to individual circumstances are almost inexhaustible.

Tailored to your needs

Talk to the DKM experts at Black Box.
With its modular design, the DKM system can be tailored exactly to your requirements. Our technicians will advise you in detail about the various opportunities available to you. They can even show you the differences to similar IP-based solutions including offers in order to acquire the best solution for you.

Free Tech Support on the Phone

Our product experts in Free Tech Support will be glad to answer any question about the DKM system - before the purchase and after the purchase. This service is free and without obligation. Take Free Tech Support for:

- Product advice: Does the product fit in my application, what features does it cover, what are the alternatives? Request of application drawings and quotations.
- Questions about KVM technologies in general.
- Ask for startup installation and configuration.
- Questions that arise during operation.

Please Call the
FREE TECH SUPPORT from Black Box

DKM Online

In the Black Box website you will find our new DKM Online Configurator that allows you to easily adjust the Modular DKM Extenders to your interface needs. Use this tool for:

- Information on connections and housings available.
- Combination of the required interfaces for the user console or computer through the Modular DKM Extenders.
- Complex overview of the required infrastructure.
- Quick quote requests.

Link: black-box.eu/DKMwizard

Or watch the video „Overview of the DKM FX Switching System". The video gives a visual overview of:

- Application examples.
- System layout.
- Configuration menues.
- System integration.

Link: black-box.eu/DKMvideo

On site consultancy in your office location

DKM Demo Kit

Free Tech Support on the Phone

On the phone all sounds wonderful, but you would like to impress with your own eyes. Our DKM demo kit makes it possible. Up in a few minutes with you, our experts will explain the system so that you can get your own picture of the performance and usability. Make an appointment for

- Live presentation of the DKM system in your home.
- Is analysis and on-site consultation.
- Training for DKM system administrators.
- Assistance with installation, configuration and updates.

Please Call your
Black Box Sales Department